

## Coast Guard, DHS

## § 39.1017

chapter I, subchapters F and J apply, unless specifically authorized by the Marine Safety Center.

### § 39.1011 Personnel training requirements—TB/ALL.

Personnel responsible for operating the vapor control system (VCS) must complete a training program prior to the operation of the system installed onboard the tank vessel. As part of the training program, personnel must be able to demonstrate, through drills and practical knowledge, the proper VCS operation procedures for normal and emergency conditions. The training program must cover the following subjects:

- (a) Purpose of a VCS;
- (b) Principles of the VCS;
- (c) Components of the VCS;
- (d) Hazards associated with the VCS;
- (e) Coast Guard regulations in this part;
- (f) Vapor control operation procedures during cargo transfer or tank barge cleaning, including:
  - (1) Testing and inspection requirements;
  - (2) Pre-transfer or pre-cleaning procedures;
  - (3) Connection sequence;
  - (4) Startup procedures; and
  - (5) Normal operations; and
- (g) Emergency procedures.

### § 39.1013 U.S.-flagged tank vessel certification procedures for vapor control system designs—TB/ALL.

(a) For an existing Coast Guard-approved vapor control system (VCS) that has been operating before July 23, 1990, the tank vessel owner or operator must submit detailed engineering drawings, calculations, and specifications to the Marine Safety Center (MSC) for review and approval before modifying the system or transferring vapor to a facility that was not approved by the Coast Guard for that kind of vapor transfer.

(b) For a Coast Guard-approved vessel VCS that began operating on or after July 23, 1990, the tank vessel owner or operator must submit plans, calculations, and specifications to the MSC for review and approval before modifying the system.

(c) A tank vessel owner or operator must submit plans, calculations, and specifications for a new tank vessel VCS to the MSC for review and approval before installing the system. A permanent or portable vapor processing unit onboard a tank vessel will be reviewed, together with the tank vessel, as a complete and integrated system.

(d) Once the plan review and inspection of the tank vessel VCS satisfy the requirements of this part, the Officer in Charge, Marine Inspection (OCMI) will endorse the Certificate of Inspection for the U.S.-flagged tank vessel.

### § 39.1015 Foreign-flagged tank vessel certification procedures for vapor control system designs—TB/ALL.

As an alternative to meeting the requirements in 33 CFR 39.1013(a), (b), and (c), the owner or operator of a foreign-flagged tank vessel may submit certification by the classification society that classifies vessels under their foreign flags to the Marine Safety Center. Upon receipt of the certification stating that the vapor control system (VCS) meets the requirements of this part, the Officer in Charge, Marine Inspection (OCMI) will endorse the vessel's Certificate of Compliance for foreign-flagged tank vessels.

### § 39.1017 Additional certification procedures for a tank barge vapor collection system design—B/ALL.

(a) For a tank barge vapor collection system intended for operation in multi-breasted loading using a single facility vapor connection, the tank barge owner or operator must submit plans, calculations, and specifications to the Marine Safety Center (MSC) for review and approval before beginning a multi-breasted loading operation.

(b) For a tank barge intended for collecting vapors emitted from its cargo tanks during gas-freeing or cleaning operations at a cleaning facility, the barge owner or operator must submit the following items to the MSC for review and approval:

- (1) Stripping system plans and specifications, except those approved by the MSC on or before the August 15, 2013; and

(2) Stripping and/or gas-freeing rate calculations, except those approved by the MSC on or before the August 15, 2013.

(c) Once the vapor collection system satisfies the requirements of this part, the Officer in Charge, Marine Inspection (OCMI) will endorse the Certificate of Inspection that the tank barge is acceptable for collecting vapors during cleaning operations.

### Subpart 39.2000—Equipment and Installation

#### § 39.2001 Vapor collection system—TB/ALL.

(a) Vapor collection piping must be fixed piping and the vessel's vapor connection must be located as close as practicable to the loading manifold, except—

(1) As allowed by the Commandant; and

(2) A vessel certificated to carry cargo listed in 46 CFR, part 151, Table 151.05 or part 153, Table 1 may use flexible hoses no longer than three meters (9.84 feet) for interconnection between fixed piping onboard the vessel to preserve segregation of cargo systems. These flexible hoses must also meet the requirements in paragraph (i) of this section, excluding paragraph (i)(5), and meet the following additional requirements:

(i) The installation of flexible hoses must include an isolation valve mounted on the tank side of the connection; and

(ii) Hose connections permitted under paragraph (a)(2) of this section are exempt from the requirements of paragraph (h) of this section.

(b) When collecting incompatible vapors simultaneously, vapors must be kept separate throughout the entire vapor collection system.

(c) Vapor collection piping must be electrically bonded to the hull and must be electrically continuous.

(d) The vapor collection system must have a mechanism to eliminate liquid condensation, such as draining and collecting liquid from each low point in the line.

(e) For a tankship that has an inert gas system, a mechanism must be in place to isolate the inert gas supply

from the vapor control system (VCS). The inert gas main isolation valve required by chapter II-2, Regulation 62.10.8 of SOLAS (incorporated by reference, see 46 CFR 39.1005), may be used to satisfy this requirement.

(f) The vapor collection system must not interfere with the proper operation of the cargo tank venting system.

(g) The tank vessel owner or operator must install an isolation valve capable of manual operation. It must be located at the vessel vapor connection and must clearly show whether the valve is in the open or closed position via an indicator, valve handle, or valve stem.

(h) The last 1.0 meter (3.3 feet) of vapor piping upstream of the vessel vapor connection and each end of a vapor hose must be—

(1) Painted in the sequence of red/yellow/red. The width of the red bands must be 0.1 meter (0.33 foot) and the width of the middle yellow band must be 0.8 meter (2.64 feet); and

(2) Labeled with the word “VAPOR” painted in black letters at least 50.8 millimeters (2 inches) high.

(i) Hoses that transfer vapors must meet the following requirements:

(1) Have a design burst pressure of at least 25 pounds per square inch gauge (psig);

(2) Have a maximum allowable working pressure no less than 5 psig;

(3) Be capable of withstanding at least a 2.0 pounds per square inch (psi) vacuum without collapsing or constricting;

(4) Be electrically continuous with a maximum resistance of 10,000 ohms;

(5) Have flanges with—

(i) A bolthole arrangement complying with the requirements for 150 pound class ANSI B16.5 flanges (incorporated by reference, see 46 CFR 39.1005); and

(ii) One or more 15.9 millimeter (0.625 inch) diameter hole(s) located midway between boltholes and in line with the bolthole pattern; and

(6) Be abrasion and kinking resistant.

(j) Each vessel vapor connection flange face must have a permanent stud projecting outward that has a 12.7 millimeter (0.5 inch) diameter and is at least 25.4 millimeters (1 inch) long. It must be located at the top of the flange